

EPA Region 10 - Underground Injection Control Program

Shallow and Deep Injection Wells

June 29, 2000

EPA's Revision to the Underground Injection Control Regulations for Class V Injection Wells Effective as of April 5, 2000

In an effort to better protect ground water quality, the EPA has revised the federal Underground Injection Control (UIC) program regulations to prohibit the installation of new motor vehicle waste disposal wells and large-capacity cesspools. The new regulation also requires that existing motor vehicle waste disposal wells and large-capacity cesspools be permanently phased out. The new provisions of the federal UIC regulations were developed in response to the realization that most motor vehicle waste disposal wells and large-capacity cesspools cannot be operated without posing a threat to the underlying ground water resource. The new UIC regulations were published in the Federal Register on December 7, 1999, and went into effect on April 5, 2000.

All owner and operators of injection wells in general are required to (1) inventory/register their injection well with the appropriate UIC program office (see list on the back of this newsletter) and (2) ensure that the injection activity is being protective of ground water. In most States, this means that the injected waste fluid would most likely need to meet the State's Ground Water Quality Standards and in some cases, may be required to obtain a permit for the injection activity. Contact the appropriate State UIC Program for more information on performance standards for operating an injection well and UIC permits.

For more information regarding the new rule, please contact Jonathan Williams, EPA, at (206) 553-1369 or Calvin Terada, EPA, at (206) 553-4141. Evaluations of Onsite Wastewater Disposal Systems to Continue at Tribal Casinos

EPA plans to continue a series of onsite wastewater system evaluations at various tribal casinos in order to obtain further information regarding the overall integrity of these disposal systems. The onsite disposal systems are considered a Class V injection well and consist of a large capacity (serving at least 20 people per day) septic system that employs a drainfield disposal method. The location of many tribal casinos lies beyond the service areas of municipal sewer systems, causing such facilities to rely on these onsite disposal systems for their domestic wastewater disposal.

The study will involve an investigative review of the engineering designs, drawings and constructed facilities, as well as an examination of the local soil and hydrogeologic factors, all of which need to be found favorable in order for the system to function adequately. Improper design, location, or operation of such drainfield septic systems could pose a serious threat to ground water quality and to the health of persons exposed to inadequately treated sewage. (The final goal of this study is to determine a protocol for the proper location, design, construction and operation of onsite, large-volume wastewater disposal systems via drainfields that will ensure the protection and safety of ground water on Indian lands.) For further information on the Tribal UIC program, please contact Jeff KenKnight, EPA, at (206) 553-0226.

Increased Awareness for Compliance Continues in Alaska

Due to increased awareness about the UIC program, including the new Class V regulations, EPA continues to receive inventory information and closure plans for shallow injection wells in Alaska. Environmental audits, often performed prior to property transactions, are being conducted by increasingly knowledgeable consultants. Also contributing to the increased awareness about shallow injection wells is the Alaska Department of Environmental Conservation's (ADEC) statewide office of compliance assistance, which has been performing on-site compliance assistance visits upon the request of small businesses.

Other News in Alaska

Coordination continues with Alaska's recently approved Source Water Protection Program as EPA and DEC assist those that perform assessments in identifying shallow injection wells that might not have been previously inventoried.

For deep injection wells, EPA is proposing a North Star Class I non-hazardous waste injection well permit. For further information about Class I or Class V injection wells in Alaska, please call Jonathan Williams, EPA, at (206) 553-1369.

Idaho Teams Up with Local Governments in Inventory Collection

The Idaho Department of Water Resources (IDWR) has been working with both city governments and local health districts in collecting inventory for shallow injection wells. As part of the inventory process, the IDWR will be collecting fees, which will be split with the local agency that meets with the public on behalf

of IDWR.

In light of the recent staff shortage with which IDWR has been coping, these agreements with local agencies will be extremely beneficial in expediting the inventory process, and will add leverage to IDWR's UIC program. Eventually this cooperative system will spread to larger communities within the state. For more information on IDWR's UIC program, please contact Mike Piechowski, IDWR, at (208)327-7956.

Other Idaho News:

Idaho Shallow Injection Well Training

The next "Problem with Shallow Injection Wells" training class which will be hosted by the Idaho Department of Water Resources will be held in Boise, Idaho in the fall of 2000. The purpose of the training will to educate municipalities, consultants, State and Federal agencies, and all other interested parties regarding the risks associated with owning and operating an shallow injection well. The training is currently being proposed to occur between the months of October and November. For more information on the training, please contact Mike Piechowski.

Washington Issues an Administrative Order against a Wood Treater

The Washington State Department of Ecology (Ecology) issued an Administrative Order on April 12, 2000 to the J.H. Baxter Company in Arlington, Washington to stop injecting storm water contaminated with a wood treating chemical which is known in the industry as Pentachlorophenol (Penta). Ecology has alleged that the J.H. Baxter Company has continually disposed of storm water contaminated with Penta into ground water in excess of the State's Ground Water Quality Standard of 1 part per billion (ppb). Data seems to indicate that the contaminated storm water run off may have contained between 34 to 960 ppb of Penta which was disposed untreated into the

subsurface through the use of ten to twenty shallow injection wells. The outcome of this Administrative Order is unknown since the company has filed an appeal to the Washington State Pollution Control Hearings Board

Special Feature: Storm Water and Shallow Injection Wells

Need a "Grassy Swale"?

Due to a large number of recent inquiries related to storm water disposal practices regarding transportation projects within the State, IDWR has strongly recommended the use of vegetated biofiltration swales, aka "grassy swales" as a method of pretreatment prior to the disposal via an injection well. Mike Piechowski, IDWR, UIC Program, commented that "while oil/water separators and other such technologies work well for settling out suspended sediments, these types of systems cannot treat the injected storm water to meet the State's ground water quality standards." Many scientific studies have been performed on vegetated biofiltration swales, as well as the treatment capabilities of these types of treatment and disposal systems. Piechowski says, "currently, there isn't an alternative method of treatment, natural or mechanical, that can treat contaminants in urban storm water run off to protect public health and meet the state's ground water quality standards. Until an alternative treatment method can be found, grassy swales seemed to be the best way to treat storm water."

For more information on Best Management Practices for Storm Water Management, please look on EPA website at www.epa.gov/region10 or contact your State UIC Program office.

Editor's Note: Many "grassy swales" are used in conjunction with injection wells so that the

swales can capture the first ½ inch of storm water, i.e., first flush. In the event that the storm water saturates the soil, the swale is designed to contain the storm water, retain it, and then allow the water to naturally seep into the ground. In some cases, an injection well is placed an inch or two above the bottom of the swale so that all of the excess storm water, i.e., overflow, can flow directly into the injection well.

New Storm Water Manual for Washington State Raises Infiltration Issues in Eastern Washington

The Washington State Department of Ecology has recently revised the storm water manual for the State to address both the Puget Sound region and Eastern Washington, and to include UIC language. While the updated draft is in the comment period, issues are being raised in Eastern Washington regarding storm water practices, especially infiltration.

Jurisdictions in Eastern Washington are working with Washington State Department of Ecology (Ecology) to determine if the suggested BMP's for infiltration will work for counties in Eastern Washington. Some counties in the region wish to maintain the use of dry wells for storm water but many of these dry wells only use soil for pretreatment, which may not be sufficient in terms of ground water protection. For further information, please contact Mary Shaleen Hansen, Washington Department of Ecology at, (360) 407-6143.

Oregon Department of Environmental Quality Highlights Article for Storm Water Strategies in Arid Regions

The Oregon Department of Environmental Quality (DEQ) recently emphasized the usefulness of an article published by the Center for Watershed Protection in terms of storm

water systems in arid regions. The article is entitled "Storm Water Strategies for Arid and Semi-arid Watersheds", and can be found in Watershed Protection Techniques v.3, n.3

Written from a more technical standpoint, the article illustrates how factors such as rainfall, evaporation, vegetation, etc. differ in these areas as compared to wetter climates. It also demonstrates the significance of these differences in terms of ground water protection and storm water techniques.

The article used information taken from various cities including Boise, Dallas, San Jose, and Denver. Other highlights mentioned in the article include the importance of pollution prevention, improvements for site design, and an examination of various storm water techniques, including injection wells, which then ranks each technique in terms of its overall benefit.

If your department does not already have a copy of the publication, you can contact Center for Watershed Protection by email at, center@cwpp.org, or look them up on the web at, www.cwpp.org.

For Further Information Regarding Class V Shallow Injection Wells

EPA Region 10 Website: www.epa.gov/region10

- Go to the Water Page
- "click" on Underground Injection Control

Alaska

Jonathan Williams
U.S. EPA Region 10
(206) 553-1369
williams.jonathan@epa.gov

Alaska

Alaska Department of Environmental Conservation -

Compliance Assistance Program
1-800-510-2332
compasst@envircon.state.ak.us

Alaska Class II Wells

Wendy Mahan
Alaska Oil and Gas Conservation Commission
(907) 279-1433
wendy_mahan@admin.state.ak.us

Alaska Class II Primacy Program Coordinator

Thor Cutler
U.S. EPA Region 10
(206) 553-1673
cutler.thor@epa.gov

Idaho

Mike Piechowski
Idaho Department of Water Resources
(208) 327-7956
mpiechow@idwr.state.id.us

Oregon

Barbara Priest
Oregon Department of Environmental Quality
(503) 229-5945
priest.barbara@deq.state.or.us

Washington

Mary Shaleen Hansen
Washington Department of Ecology
(360) 407-6143
maha461@ecy.wa.gov

Tribal

Jeff KenKnight
U.S. EPA Region 10
(206) 553-0226
kenknight.jeff@epa.gov

ID, OR, and WA Primacy Program Coordinator

Calvin Terada
U.S. EPA Region 10

(206) 553-4141
terada.calvin@epa.gov

Newsletter prepared by C. Deichl, June 29, 2000